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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/659,932	09/11/2003	John F. Kennedy	GEOP-01000US1	5061
23910 7590 05/11/2009				
FLIESLER MEYER LLP				
650 CALIFORNIA STREET				
14TH FLOOR				
SAN FRANCISCO, CA 94108				
EXAMINER				
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ART UNIT		PAPER NUMBER		
2123				
MAIL DATE		DELIVERY MODE		
05/11/2009		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/659,932

**Applicant(s)**

KENNEDY ET AL.

**Examiner**

CARLOS ORTIZ RODRIGUEZ

**Art Unit**

2123

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 02 March 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4) ☒ Claim(s) 1, 3-15, 17-19, 21-31, 33-43, 45-47, 49-57, 59-71, 73-75, 77-85, 87-105, 107-112, 115-125, 140-155, 157-159, 161-171, 173-182 and 185-187 and 189-196 is/are pending in the application.

4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.

6) ☒ Claim(s) See Continuation Sheet is/are rejected.

7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.

8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) ☐ All b) ☐ Some \* c) ☐ None of:

1. ☐ Certified copies of the priority documents have been received.

2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.

3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO/SB/08)

Paper No(s)/Mail Date \_\_\_\_\_

4) ☐ Interview Summary (PTO-413)

Paper No(s)/Mail Date \_\_\_\_\_

5) ☐ Notice of Informal Patent Application

6) ☐ Other: \_\_\_\_\_

Continuation of Disposition of Claims: Claims rejected are 1,3-15,17-19,21-31,33-43,45-47,49-57,59-71,73-75,77-85,87-105,107-112,115-125,140-155,157-159,161-171,173-182,185-187 and 189-196.

**DETAILED ACTION**

1. Claims 1, 3-15, 17-19, 21-31, 33-43, 45-47, 49-57, 59-71, 73-75, 77-85, 87-105, 107-112, 115-125, 140-155, 157-159, 161-171, 173-182 and 185-187 and 189-196 are pending.

2. Claims 2, 16, 20, 32, 44, 48, 58, 72, 76, 86, 106, 113-114, 126-139, 156, 160, 172, 183-184 and 188 are cancelled.

***Continued Examination Under 37 CFR 1.114***

3. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 03/02/09 has been entered.

***Response to Arguments***

4. Applicant's arguments filed 03/02/09 have been fully considered. Applicant's arguments regarding claims 1, 3-15, 17-19, 21-31, 33-43, 45-57, 59-71, 73-75, 77-85, 87-105, 107-112, 115, 140-155, 157-159, 161-171, 173-182 and 185-187 and 189-196

are moot in view of the new grounds of rejection. In response to Applicant's arguments regarding claims 116-125, please note that Shanahan teaches content relating to blueprints, building materials and simulations of buildings. Note that this criteria is at least partially related to building representation and energy analysis of a building representation.

***Claim Rejections - 35 USC § 101***

5. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

6. Claims 1, 4-7, 9-15, 17-19, 21-28, 29-30, 33-35, 37-43, 45-46, 49-57, 60-63, 65-71, 73-75, 77-85, 87-94, 96-102 and 116-125 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. These claims do not comply with 35 U.S.C. 101 because they are not tied to another statutory class (such as a particular apparatus) or transform underlying subject matter (such as an article or materials) to a different state or thing. The claims must positively recite (in the body of the claim) the particular apparatus performing the claimed method steps.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to

be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1, 3-6, 9-15, 17-19, 21-23, 28-29, 30-31, 33-34, 37-43, 45-47, 49-51, 56-57, 59-62, 65-71, 73-75, 77-79, 84-85, 87-93, 96-102, 140-141, 143-146, 149-155, 157-159, 161-163, 168-171, 173-174, 177-182, 185-191 and 196 are rejected under 35 U.S.C. 103(a) as being unpatentable over Subbarao U.S. Patent No. 6,134,511 (hereinafter Subbarao) in view of Balcomb et al., "Multi-Criteria Decision-Making Process for Buildings", National Renewable Energy Laboratory NREL, June 2000 (hereinafter Balcomb).

a. **Regarding claims 1, 3-6, 9-15, 17-19, 21-23, 28, 57, 59-62, 65-71, 73-75, 77-79, 84-85, 87-93 and 96-102**, Subbarao discloses analyzing the energy requirements of a building (C11 L13-27 and C13-14, DOE-2 program), comprising: under control of a first process: providing a first three dimensional (3D) representation of the building, (C3 L59-61, C6 L17-20, C6 L40-42); providing the first representation to a second process on the computer network; under control of the second process: automatically performing an energy analysis of the building based on the first representation by determining energy use and cost of the building using information that includes one or more of the building's geographical location, three-dimensional geometry, construction materials, utility rate schedule and HVAC equipment (C6 L25-42, C7 L34-67 and Fig 1); and automatically providing default values for the first representation appropriate for

performing an energy analysis of the building, wherein the default values include at least one of: 1) heating, ventilation and/or air conditioning equipment; 2) weather-related information; 3) interior/exterior constructions; 4) interior/exterior lighting equipment; 5) schedules of operations for interior/exterior lights; 6) interior/exterior equipment; 7) schedules of operations for interior/exterior equipment; 8) air flow information; 9) schedules of operations for heating, ventilation and/or air conditioning equipment; 10) number of people; 11) schedules of occupancy for people; and 12) any additional information necessary to conduct a building energy analysis (C1 L50-67, C4 L1-13, C12 L45-63); wherein: the default values are based on 1) building type; and 2) geographic location of the building (C13 L40-50). Subbarao further discloses wherein: the first representation is provided by a 3D-CAD or BIMA application (C1 L14-32 and C6 L17-21). Subbarao further discloses incorporating the default values into the first representation of the building is an inherent property of DOE-2 (C13 and C14). Subbarao further discloses wherein: the first representation of the building includes at least one of: 1) a building type; 2) a space; 3) a three dimensional representation of the building; 4) a location of the building; 5) at least one surface; and 6) an opening (C14 L13-16). Subbarao further discloses wherein: the at least one space includes at least one of: 1) space type; and 2) at least one surface (C6 L40-43). Subbarao further discloses wherein: the results of the energy analysis include at least one of: 1) energy cost over a period of time; 2) peak demand over a period of time; 3) fuel use over a period of time; 4) electricity

use over a period of time; 5) airflow requirements over a period of time; 6) comfort level over a period of time; 7) temperatures over a period of time; 8) cooling equipment sizes; 9) whether or not a building complies with applicable energy codes; 10) what needs to be done in order to bring a building into conformance with applicable energy codes; 11) heating equipment sizes; and 12) any information in the first representation and/or any default values provided for the first representation (C18 L5-60). Subbarao further discloses wherein: the results of the energy analysis apply to at least one of: 1) the building; 2) one or more spaces within the building; and 3) any information in the first representation and/or any default values provided for the first representation (C13 L22-25). Subbarao further discloses wherein the results of the energy analysis are persisted is an inherent characteristic of DOE-2. Subbarao further discloses incorporating the results of the energy analysis into a second representation of the building, wherein the second representation of the building is based on the first representation is an inherent property of DOE-2 (C13 and C14). Subbarao further discloses wherein: optimization includes optimizing at least one of the following parameters: 1) building orientation; 2) glazing; 3) construction materials; 4) heating air conditioning and/or ventilation systems; 5) lighting and light control schemes; and 6) any information in the first representation (C11 L23-27). Subbarao further discloses wherein: each of the parameters is held constant or restricted to a range of possible values is an inherent characteristic of DOE-2. Subbarao further discloses wherein: the energy analysis is performed in whole or



in part by a computer software program, at least one of the following programs: 1) DOE 2; and 2) EnergyPlus (C13 and C14). Subbarao further discloses wherein the first representation of the building is a 3D mono-planarization representation is an inherent property of DOE-2. Subbarao further discloses providing content to a user based on information in at least one of: 1) the first representation; and 2) the results is an inherent property of DOE-2. Subbarao further discloses wherein: a first user can allow other users to access and/or manipulate at least one of: 1) the first representation; 2) the energy analysis results; and 3) default values appropriate for performing an energy analysis of the building is an inherent property of DOE-2.

But Subbarao fails to clearly specify wherein a representation of a building includes a complete and detailed geometry of the building, the spaces in the building, building surfaces and building openings; and utilizing results of an energy analysis in order to optimize a first representation of a building wherein optimizing includes performing one or more simulations while varying parameters of the first representation of the building and automatically ranking results of simulations according to a predetermined criteria.

However, Balcomb discloses specify wherein a representation of a building includes a complete and detailed geometry of the building, the spaces in the building, building surfaces and building openings; and utilizing results of an energy analysis in order to optimize a first representation of a building wherein optimizing includes performing one or more simulations while varying parameters

of the first representation of the building and automatically ranking results of simulations according to a predetermined criteria (Page 1 C1, Page 3-4 see the section labeled as "The Reference Building", Page 4 C2, Page 8 C1 L16-28).

Subbarao and Balcomb are analogous art because they are from the same field of endeavor. They both relate to building design.

Therefore at time the invention was made, it would have been obvious to a person of ordinary skill in the art to modify the above teachings disclosed by Subbarao and combining them with the teachings disclosed by Balcomb.

One of ordinary skill in the art would have been motivated to do this modification in order to reduce cost in building sustainability as suggested by Balcomb (see for example the "Conclusion").

b. **Regarding claims 29, 33, 51, 140-141, 144-145, 169 and 173** Subbarao discloses analyzing the energy requirements of a building (C11 L13-27 and C13-14, DOE-2 program), comprising: under control of a first process: providing a first three dimensional (3D) representation of the building wherein the first representation is a comprehensive and accurate geometric representation of the building (C3 L59-61, C6 L17-20, C6 L40-42); providing the first representation to a second process on the computer network; under control of the second process: automatically performing an energy analysis of the building based on the first representation by determining energy use and cost of the building using information that includes one or more of the building's geographical location,

three-dimensional geometry, construction materials, utility rate schedule and HVAC equipment (C6 L25-42, C7 L34-67 and Fig 1); wherein the first process and the second process communicate using the computer network (C11 L1-27); and automatically providing default values for the first representation appropriate for performing an energy analysis of the building, wherein the default values include at least one of: 1) heating, ventilation and/or air conditioning equipment; 2) weather-related information; 3) interior/exterior constructions; 4) interior/exterior lighting equipment; 5) schedules of operations for interior/exterior lights; 6) interior/exterior equipment; 7) schedules of operations for interior/exterior equipment; 8) air flow information; 9) schedules of operations for heating, ventilation and/or air conditioning equipment; 10) number of people; 11) schedules of occupancy for people; and 12) any additional information necessary to conduct a building energy analysis (C1 L50-67, C4 L1-13, C12 L45-63); wherein: the default values are based on 1) building type; and 2) geographic location of the building (C13 L40-50).

But Subbarao fails to clearly specify utilizing the results of the energy analysis in order to optimize the first representation of the building wherein optimizing includes performing one or more simulations while varying parameters of the first representation of the building and automatically ranking results of the simulations according to a predetermined criteria.

However, Balcomb teaches utilizing results of an energy analysis in order to optimize a first representation of a building wherein optimizing includes

performing one or more simulations while varying parameters of the first representation of the building and automatically ranking results of simulations according to a predetermined criteria (Page 1 C1, Page 3-4 see the section labeled as "The Reference Building", Page 4 C2, Page 8 C1 L16-28).

Subbarao and Balcomb are analogous art because they are from the same field of endeavor. They both relate to building design.

Therefore at time the invention was made, it would have been obvious to a person of ordinary skill in the art to modify the above teachings disclosed by Subbarao and combining them with the teachings disclosed by Balcomb.

One of ordinary skill in the art would have been motivated to do this modification in order to reduce cost in building sustainability as suggested by Balcomb (see for example the "Conclusion").

c. **Regarding claims 30, 142 and 170** the combination of Subbarao and Balcomb teaches all the limitations of the base claims as outlined above.

Balcomb further teaches wherein a representation of a building includes a complete and detailed geometry of the building, spaces in the building, building surfaces and building openings (Page 1 C1, Page 3-4 see the section labeled as "The Reference Building", Page 4 C2, Page 8 C1 L16-28).

d. **Regarding claims 31, 143 and 171**, the combination of Subbarao and Balcomb teaches all the limitations of the base claims as outlined above.

Subbarao further teaches wherein: the first representation is provided by a 3D-CAD or BIMA application (C1 L14-32 and C6 L17-21).

e. **Regarding claims 34, 146 and 174**, the combination of Subbarao and Balcomb teaches all the limitations of the base claims as outlined above.

Subbarao further teaches incorporating the default values into the first representation of the building is an inherent property of DOE-2 (C13 and C14).

f. **Regarding claims 37, 149 and 177**, the combination of Subbarao and Balcomb teaches all the limitations of the base claims as outlined above.

Subbarao further teaches wherein: the first representation of the building includes at least one of: 1) a building type; 2) a space; 3) a three dimensional representation of the building; 4) a location of the building; 5) at least one surface; and 6) an opening (C14 L13-16).

g. **Regarding claims 38, 150 and 178**, the combination of Subbarao and Balcomb teaches all the limitations of the base claims as outlined above.

Subbarao further teaches wherein: the at least one space includes at least one of: 1) space type; and 2) at least one surface (C6 L40-43).

h. **Regarding claims 39, 151 and 179**, the combination of Subbarao and Balcomb teaches all the limitations of the base claims as outlined above.

Subbarao further teaches wherein: the results of the energy analysis include at least one of: 1) energy cost over a period of time; 2) peak demand over a period of time; 3) fuel use over a period of time; 4) electricity use over a period of time; 5) airflow requirements over a period of time; 6) comfort level over a period of time; 7) temperatures over a period of time; 8) cooling equipment sizes; 9) whether or not a building complies with applicable energy codes; 10) what needs to be done in order to bring a building into conformance with applicable energy codes; 11) heating equipment sizes; and 12) any information in the first representation and/or any default values provided for the first representation (C18 L5-60).

i. **Regarding claims 40, 152 and 180**, the combination of Subbarao and Balcomb teaches all the limitations of the base claims as outlined above. Subbarao further teaches wherein: the results of the energy analysis apply to at least one of: 1) the building; 2) one or more spaces within the building; and 3) any information in the first representation and/or any default values provided for the first representation (C13 L22-25).

j. **Regarding claims 41, 153 and 181**, the combination of Subbarao and Balcomb teaches all the limitations of the base claims as outlined above. Subbarao further teaches wherein the results of the energy analysis are persisted (this limitation is an inherent characteristic of DOE-2).

- k. **Regarding claims 42-43, 154-155 and 182**, the combination of Subbarao and Balcomb teaches all the limitations of the base claims as outlined above. Subbarao further teaches incorporating the results of the energy analysis into a second representation of the building, wherein the second representation of the building is based on the first representation (this limitation is an inherent property of DOE-2 also see C13 and C14).
- l. **Regarding claims 45, 157 and 185**, the combination of Subbarao and Balcomb teaches all the limitations of the base claims as outlined above. Balcomb further teaches wherein: optimization includes optimizing at least one of the following parameters: 1) building orientation; 2) glazing; 3) construction materials; 4) heating air conditioning and/or ventilation systems; 5) lighting and light control schemes; and 6) any information in the first representation (Page 1 C1, Page 3-4 see the section labeled as "The Reference Building", Page 4 C2, Page 8 C1 L16-28).
- m. **Regarding claims 46, 158 and 186** the combination of Subbarao and Balcomb teaches all the limitations of the base claims as outlined above. Subbarao further teaches wherein: each of the parameters is held constant or restricted to a range of possible values (this limitation is an inherent characteristic of DOE-2).

- n.     **Regarding claims 47, 159 and 187**, the combination of Subbarao and Balcomb teaches all the limitations of the base claims as outlined above. Subbarao further teaches wherein: the energy analysis is performed in whole or in part by a computer software program, at least one of the following programs: 1) DOE 2; and 2) EnergyPlus (C13 and C14).
- o.     **Regarding claims 49, 161 and 189**, the combination of Subbarao and Balcomb teaches all the limitations of the base claims as outlined above. Subbarao further teaches wherein the first representation of the building is a 3D mono-planarization representation is an inherent property of DOE-2.
- p.     **Regarding claims 50, 162-163, 190 and 191**, the combination of Subbarao and Balcomb teaches all the limitations of the base claims as outlined above. Subbarao further teaches providing content to a user based on information in at least one of: 1) the first representation; and 2) the results (this limitation is an inherent property of DOE-2).
- q.     **Regarding claims 56, 168 and 196**, the combination of Subbarao and Balcomb teaches all the limitations of the base claims as outlined above. Subbarao further teaches wherein: a first user can allow other users to access and/or manipulate at least one of: 1) the first representation; 2) the energy



analysis results; and 3) default values appropriate for performing an energy analysis of the building (this limitation is an inherent property of DOE-2).

7. Claims 7-8, 24-27, 35-36, 52-55, 63-64, 80-83, 94-95, 103-105, 107-112, 115, 147-148, 164-167, 175-176 and 192-195 are rejected under 35 U.S.C. 103(a) as being unpatentable over Subbarao U.S. Patent No. 6,134,511 in view (hereinafter Subbarao) in view of Balcomb et al., "Multi-Criteria Decision-Making Process for Buildings", National Renewable Energy Laboratory NREL, June 2000 (hereinafter Balcomb) and in view of Ananian et al. U.S. Patent No. 6,922,701 (hereinafter Ananian).

a. **Regarding claims 7, 24-27, 63, 80-83 and 94** the combination of Subbarao and Balcomb discloses all the limitations of the base claims as outlined above.

But the combination of Subbarao and Balcomb fails to clearly specify information in one of the following forms: 1) Extensible Markup Language (XML); 2) Green Building XML (gbXML); and 3) International Alliance for Interoperability Industry Foundation Classes; wherein the content includes advertisements; wherein: an advertisement selected by a user; and wherein the selection causes at least one of the following to be made accessible to a third party: 1) user contact information; 2) information based on the first representation; 3) information based on the energy analysis results; and 4) information based on default values appropriate for performing an energy analysis of the building; wherein: an advertisement is selected by a user; and wherein the selection

causes the user to be prompted for permission to make accessible at least one of the following to a third party: 1) user contact information; 2) information based on the first representation; 3) information based on the energy analysis results; and 4) information based on default values appropriate for performing an energy analysis of the building; and requesting a bid from a third party based on at least one of: 1) the first representation; 2) the energy analysis results; and 3) default values appropriate for performing an energy analysis of the building.

However, Ananian discloses information in one of the following forms: 1) Extensible Markup Language (XML); 2) Green Building XML (gbXML); and 3) International Alliance for Interoperability Industry Foundation Classes (C16 L22-33). Ananian further discloses wherein: the content includes advertisements (C1 L15-33). Ananian further discloses wherein: an advertisement selected by a user; and wherein the selection causes at least one of the following to be made accessible to a third party: 1) user contact information; 2) information based on the first representation; 3) information based on the energy analysis results; and 4) information based on default values appropriate for performing an energy analysis of the building (C14 L45-55). Ananian further discloses wherein: an advertisement is selected by a user; and wherein the selection causes the user to be prompted for permission to make accessible at least one of the following to a third party: 1) user contact information; 2) information based on the first representation; 3) information based on the energy analysis results; and 4) information based on default values appropriate for performing an energy

analysis of the building (C14 L45-55). Ananian further discloses requesting a bid from a third party based on at least one of: 1) the first representation; 2) the energy analysis results; and 3) default values appropriate for performing an energy analysis of the building (C22 L53-67 and C23 L1-18).

Subbarao, Balcomb and Ananian are analogous art because they are from the same field of endeavor. They all relate to building information systems.

Therefore at time the invention was made, it would have been obvious to a person of ordinary skill in the art to modify the above teachings disclosed by the combination of Subbarao and Balcomb and combining it with the teachings disclosed by Ananian.

One of ordinary skill in the art would have been motivated to do this modification in order to reduce the time involved in the design process as suggested by Ananian (C3 L42-46).

b. **Regarding claims 8, 64, 95** the combination of Subbarao, Balcomb and Ananian teaches all the limitations of the base claims as outlined above. Furthermore, it should be noted that wherein: a first representation of a building is at least one of: 1) compressed; 2) encoded; and 3) encrypted is an inherent property to DOE-2 (a DOE-2 model is a compressed version of the building representation).

c. **Regarding claims 35, 52-55, 147, 164-167, 175 and 192-195**, the combination of Subbarao and Balcomb and Ananian teaches all the limitations of the base claims.

Ananian further teaches information in one of the following forms: 1) Extensible Markup Language (XML); 2) Green Building XML (gbXML); and 3) International Alliance for Interoperability Industry Foundation Classes (C16 L22-33). Ananian further discloses wherein: the content includes advertisements (C1 L15-33). Ananian further discloses wherein: an advertisement selected by a user; and wherein the selection causes at least one of the following to be made accessible to a third party: 1) user contact information; 2) information based on the first representation; 3) information based on the energy analysis results; and 4) information based on default values appropriate for performing an energy analysis of the building (C14 L45-55). Ananian further discloses wherein: an advertisement is selected by a user; and wherein the selection causes the user to be prompted for permission to make accessible at least one of the following to a third party: 1) user contact information; 2) information based on the first representation; 3) information based on the energy analysis results; and 4) information based on default values appropriate for performing an energy analysis of the building (C14 L45-55). Ananian further discloses requesting a bid from a third party based on at least one of: 1) the first representation; 2) the energy analysis results; and 3) default values appropriate for performing an energy analysis of the building (C22 L53-67 and C23 L1-18).

d. **Regarding claims 36, 148 and 176**, the combination of Subbarao and Balcomb and Ananian teaches all the limitations of the base claims.

Ananian further teaches all the limitations of the base claims as outlined above. Furthermore, it should be noted that wherein: a first representation of a building is at least one of: 1) compressed; 2) encoded; and 3) encrypted is an inherent property to DOE-2 (a DOE-2 model is a compressed version of the building representation).

e. **Regarding claim 103-105, 107-112 and 115**, Subbarao discloses allowing a user to interact with content including product and service advertisements or product placement on building instance for analysis, using a computer network, comprising: automatically providing the content to the user based on a set of criteria associated with the building characteristics including its energy use information and wherein at least one of the criteria is satisfied based on a representation of a building and results of an energy analysis of the representation of the building. Subbarao further discloses wherein: the representation of the building is at least one of: 1) compressed; 2) encoded; and 3) encrypted is an inherent property to DOE-2 (a DOE-2 model is a compressed version of the building representation). Subbarao further discloses performing an energy analysis of the building representation (C13 and C14). Subbarao further discloses incorporating default values into the first representation of the building

is an inherent property of DOE-2 (C13 and C14). Subbarao further discloses wherein: the representation of the building includes at least one of: 1) a building type; 2) a space; 3) a three dimensional representation of the building; 4) a location of the building; 5) at least one surface; and 6) an opening (C14 L13-16). Subbarao further discloses wherein: the results of the energy analysis includes at least one of: 1) energy cost over a period of time; 2) peak demand over a period of time; 3) fuel use over a period of time; 4) electricity use over a period of time; 5) airflow requirements over a period of time; 6) comfort level over a period of time; 7) temperatures over a period of time; 8) cooling equipment sizes; 9) whether or not a building complies with applicable energy codes; 10) what needs to be done in order to bring a building into conformance with applicable energy codes; 11) heating equipment sizes; and 12) any information in the representation and/or any default values provided for the first representation (C18 L5-60). Subbarao further discloses wherein: the results of the energy analysis apply to at least one of: 1) the building; 2) one or more spaces within the building; and 3) any information in the representation and/or any default values provided for the first representation (C13 L22-25).

But Subbarao fails to clearly specify utilizing the results of the energy analysis to optimize the first representation of the building wherein optimizing includes performing one or more simulations while varying parameters of the first representation of the building and automatically ranking results of simulations according to a predetermined criteria. Subbarao further fails to clearly specify

receiving input indicative of user interaction with the content where the input comprises: 1) a request for information; 2) a request for a bid; 3) permission to access information associated with the user; 4) providing permission to access information associated with the representation of the building and/or results of the energy analysis; wherein: permission to access information is given for an aggregate view of the information or for the entirety of the information; wherein: the content is provided to the user via the World Wide Web; information in the following forms: 1) Extensible Markup Language (XML); 2) Green Building XML (gbXML); and 3) International Alliance for Interoperability Industry Foundation Classes; wherein: the computer network includes at least one of the following: 1) the Internet; 2) public networks; and 3) private networks; and wherein: the content includes at least one of: 1) a uniform resource locator (URL); 2) a hypertext markup language (HTML) document; 3) an extensible markup language (XML) document; 4) an audio/visual presentation; 5) text; and 6) an image.

However, Balcomb teaches utilizing the results of the energy analysis to optimize the first representation of the building wherein optimizing includes performing one or more simulations while varying parameters of the first representation of the building and automatically ranking results of simulations according to a predetermined criteria (Page 1 C1, Page 3-4 see the section labeled as "The Reference Building", Page 4 C2, Page 8 C1 L16-28).

Subbarao and Balcomb are analogous art because they are from the same field of endeavor. They both relate to building design.

Therefore at time the invention was made, it would have been obvious to a person of ordinary skill in the art to modify the above teachings disclosed by Subbarao and combining them with the teachings disclosed by Balcomb.

One of ordinary skill in the art would have been motivated to do this modification in order to reduce cost in building sustainability as suggested by Balcomb (see for example the "Conclusion").

The combination of Subbarao and Balcomb fails to clearly specify receiving input indicative of user interaction with the content where the input comprises: 1) a request for information; 2) a request for a bid; 3) permission to access information associated with the user; 4) providing permission to access information associated with the representation of the building and/or results of the energy analysis; wherein: permission to access information is given for an aggregate view of the information or for the entirety of the information; wherein: the content is provided to the user via the World Wide Web; information in the following forms: 1) Extensible Markup Language (XML); 2) Green Building XML (gbXML); and 3) International Alliance for Interoperability Industry Foundation Classes; wherein: the computer network includes at least one of the following: 1) the Internet; 2) public networks; and 3) private networks; and wherein: the content includes at least one of: 1) a uniform resource locator (URL); 2) a hypertext markup language (HTML) document; 3) an extensible markup



language (XML) document; 4) an audio/visual presentation; 5) text; and 6) an image.

However, Ananian discloses receiving input indicative of user interaction with the content where the input comprises: 1) a request for information; 2) a request for a bid; 3) permission to access information associated with the user; 4) providing permission to access information associated with the representation of the building and/or results of the energy analysis (C14 L45-55). Ananian further discloses wherein: permission to access information is given for an aggregate view of the information or for the entirety of the information (C14 L45-55). Ananian further discloses wherein: the content is provided to the user via the World Wide Web (C16 L22-33). Ananian further discloses information in the following forms: 1) Extensible Markup Language (XML); 2) Green Building XML (gbXML); and 3) International Alliance for Interoperability Industry Foundation Classes (C16 L22-33). Ananian further discloses wherein: the computer network includes at least one of the following: 1) the Internet; 2) public networks; and 3) private networks (C16 L22-33). Ananian further discloses wherein: the content includes at least one of: 1) a uniform resource locator (URL); 2) a hypertext markup language (HTML) document; 3) an extensible markup language (XML) document; 4) an audio/visual presentation; 5) text; and 6) an image (C16 L22-33).

Subbarao, Balcomb and Ananian are analogous art because they are from the same field of endeavor. They all relate to building information systems.

Therefore at time the invention was made, it would have been obvious to a person of ordinary skill in the art to modify the above teachings disclosed by the combination of Subbarao and Balcomb and combining it with the teachings disclosed by Ananian.

One of ordinary skill in the art would have been motivated to do this modification in order to reduce the time involved in the design process as suggested by Ananian (C3 L42-46).

8. Claims 116-120 and 123-125 are rejected under 35 U.S.C. 102 (e) as being anticipated by Shanahan et al. U.S. Publication No. 2005/0022114 (hereinafter Shanahan).

a. **Regarding claim 116**, Shanahan discloses generating a qualified result list based on a building representation and using a computer network, comprising: maintaining a database of at least one information provider, wherein each of the at least one information providers has associated with it a set of building criteria and content (Paragraph 0236-237); identifying a result set of the at least one information providers that have criteria at least partially satisfied by the building representation and an energy analysis of the building representation (Paragraph 0272); ranking the information providers in a result set into a result list; and providing content via the computer network corresponding to at least the highest ranked information provider in the result list (Paragraph 0312).

- b. **Regarding claim 117**, Shanahan discloses wherein: the ranking is based on at least one of the following: 1) the number of criteria satisfied for a given information provider; 2) an amount of credit an information provider will provide in exchange for placement in the result list; and 3) content category (Paragraph 0312).
  
- c. **Regarding claim 118**, Shanahan discloses wherein: the content category corresponds to a product type (Paragraph 0312).
  
- d. **Regarding claim 119**, Shanahan discloses wherein: content includes at least one of: 1) a uniform resource locator (URL); a hypertext markup language (HTML) document; 3) an extensible markup language (XML) document; 4) an audio/visual presentation; 5) text; and 6) an image (Paragraph 61).
  
- e. **Regarding claim 120**, Shanahan discloses wherein: the content associated with an information provider includes promotional content (Paragraph 0219).
  
- f. **Regarding claim 123**, Shanahan discloses determining a relevancy score for each of the information providers at least one of: 1) the result set; and 2) the result list (Paragraph 0312).

- g. **Regarding claim 124**, Shanahan discloses wherein the step of providing via the computer network the at least highest ranked information provider includes: presenting the at least highest ranked information provider(s) to a user in order of rank (Paragraph 0312).
  - h. **Regarding claim 125**, Shanahan discloses wherein the step of providing via the computer network the at least highest ranked information provider includes: presenting the at least highest ranked information provider(s) according to information category (Paragraph 0312).
- 9. Claims 121-122 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shanahan et al. U.S. Publication No. 2005/0022114 (hereinafter Shanahan) in view of Balcomb et al., "Multi-Criteria Decision-Making Process for Buildings", National Renewable Energy Laboratory NREL, June 2000 (hereinafter Balcomb).
  - a. **Regarding claims 121**, Shanahan discloses all the limitations of the base claims.

But Shanahan fails to clearly specify that the energy analysis of the building representation has been optimized.

However, Balcomb teaches that the energy analysis of the building representation has been optimized (Page 1 C1, Page 3-4 see the section labeled as "The Reference Building", Page 4 C2, Page 8 C1 L16-28).

Shanahan and Balcomb are analogous art because they are from the same field of endeavor. They both relate to content information systems.

Therefore at time the invention was made, it would have been obvious to a person of ordinary skill in the art to modify the above teachings disclosed by Shanahan and combining it with the teachings disclosed by Balcomb.

One of ordinary skill in the art would have been motivated to do this modification in order to reduce cost in building sustainability as suggested by Balcomb (see for example the "Conclusion").

b. **Regarding claim 122**, the combination of Shanahan and Balcomb discloses all the limitations of the base claims as outlined above.

Balcomb further teaches wherein: the criteria includes at least one of: building area, building type, building location, building space types, cooling and/or heating loads, total building glazing area, heat load on glazing, glazing area by space, amount of glazing by elevation, minimum SHGC (Solar Heat Gain Coefficient) requirement, minimum U-value requirement, glazing dimensions, building heating and/or cooling loads, building and/or space CFM (Cubic Feet per Minute) requirements, total building cooling and heating loads, heating and cooling load by space, building and space latent and sensible cooling loads, design day conditions, building operation schedule, building type, space types, potential for daylighting and/or occupancy lighting controls, and anything in the

building representation and/or energy analysis of the building representation (Page 1 C1, Page 3-4 see the section labeled as "The Reference Building", Page 4 C2, Page 8 C1 L16-28).

### ***Conclusion***

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Carlos Ortiz-Rodriguez whose telephone number is 571-272-3766. The examiner can normally be reached on Mon-Fri 10:00 am- 6:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Rodriguez can be reached on 571-272-3753. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Carlos Ortiz-Rodriguez  
Patent Examiner

Art Unit: 2123

Art Unit 2123

May 11, 2009

/Kideest Bahta/

Primary Examiner, Art Unit